

## PATENT ABSTRACTS OF JAPAN

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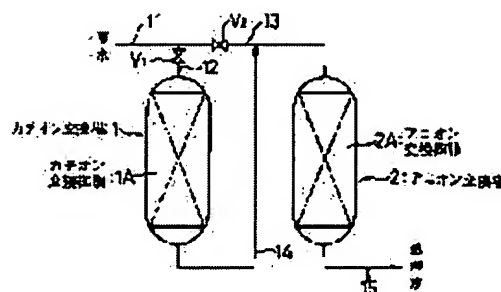
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## (54) ION EXCHANGE DEVICE

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To improve the removal of corrosive ions, and remove cation to the level of desired concentration by connecting a cation exchange column and an anion exchange column with a raw water piping through valves in which the flow rate can be regulated and filling the columns with cation exchange resin and anion exchange resin of uniform particle diameters respectively.

**SOLUTION:** A cation exchange column 1 and an anion exchange column 2 are connected respectively with a raw water introduction piping 11 by pipings 12 and 13 through flow regulating valves V1 and V2. The outflow water in the cation exchange column 1 is introduced into the anion exchange column 2 through a piping 14. Water passing through the anion exchange column 2 is discharged out of a system through a piping 15. H<sup>+</sup> type and Na<sup>+</sup> type exchange resins 1A of average particle diameter of 400-500μm is filled in the cation exchange column 1. Anion exchange resin 2A of HCO<sub>3</sub><sup>-</sup> type of average particle diameter of 450-650μm is filled in the anion exchange column 2. The particles in the range of particle diameter of 0.9-1.1 times as large as the average diameter are set to be 85% or more of the total particles in both exchange resins 1A and 2A.



## LEGAL STATUS

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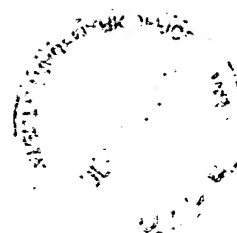
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